

REMARKS

I. Summary of Office Action

Claims 1-13 were examined and are pending in the above-identified patent application.

The Examiner objected to claims 1-13 on informal grounds.

The Examiner rejected claims 1, 3, 4, 11, and 13 under 35 U.S.C. § 103(a) as being unpatentable over Beck U.S. Patent No. 6,276,761 ("Beck") in view of Crouch U.S. Patent No. 3,432,210 ("Crouch").

The Examiner rejected claims 2 and 12 under 35 U.S.C. § 103(a) as being unpatentable over Beck in view of Crouch and further in view of Buma et al. U.S. Patent No. 4,911,617 ("Buma I").

The Examiner rejected claims 5 and 6 under 35 U.S.C. § 103(a) as being unpatentable over Beck in view of Crouch and further in view of Buma et al. U.S. Patent No. 4,799,707 ("Buma II").

The Examiner rejected claim 7 under 35 U.S.C. § 103(a) as being unpatentable over Beck in view of Crouch and further in view of Müller et al. U.S. Patent No. 4,616,881 ("Müller").

The Examiner rejected claims 8-10 under 35 U.S.C. § 103(a) as being unpatentable over Beck in view of Crouch and Müller and further in view of Terborn et al. U.S. Patent No. 6,149,246 ("Terborn").

II. Summary of the Reply

Applicants have amended claims 1, 3, 6, and 11 to clarify the claim language. The claim amendments are fully supported by the originally-filed application and therefore do not add new matter. An RCE is being submitted concurrently herewith.

The Examiner's rejections and objections are respectfully traversed.

III. Examiner Interview Summary

On October 14, 2010, a telephone interview took place between Examiner Melody Burch and the applicants' undersigned agent. Applicants' undersigned agent wishes to thank the Examiner for the courtesies extended during this interview.

In the interview, the Examiner and applicants' undersigned agent discussed independent claim 1 and the Beck and Crouch references. In particular, applicants' undersigned agent argued that Beck cannot be combined with Crouch because doing so would render the Beck system inoperable for its intended purpose. And, as case law has shown, "if a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification" (MPEP 214.01.V, citing *In re Gordon*, 733 F.2d 900). A more detailed discussion of this argument is presented below with regards to the rejection of independent claim 1.

In the interview, this argument against the combination of Beck and Crouch was favorably received by the Examiner. The Examiner thus requested that this argument be formally submitted in a Reply to the final Office Action.

IV. Applicants' Reply to the Claim Objections

The Examiner objected to claims 1-13. In particular, the Examiner argued that claim 1 should be reworded since it appeared initially to suggest that the electrically actuatable valve(s) associated with the high pressure compressed air load circuit are normally open in a de-energized state and later appeared to suggest that these valves are normally closed in a de-energized state (*see*, the final Office Action, page 2). Claims 2-13 were then objected to for depending from claim 1.

In response, applicants have amended claim 1 to clarify that the electrically actuatable valve(s) associated with the high pressure compressed air load circuit are in a closed position in a de-energized normal state. Applicants thus respectfully request that the objection to claims 1-13 be withdrawn.

V. Applicants' Reply to the 35 U.S.C. § 103(a) Rejection
With Respect to Beck and Crouch

The Examiner rejected claims 1, 3, 4, 11, and 13 under 35 U.S.C. § 103(a) as being unpatentable over Beck in view of Crouch. Applicant respectfully traverses.

Applicants' claimed invention, as defined by independent claim 1, is directed to an electronic compressed air system for a vehicle. The compressed air system includes a compressed air supply part and a compressed air consumer part. This compressed air consumer part includes, among other things, a plurality of service-brake circuits, a high pressure compressed air load circuit, and electrically actuatable valves. The electrically actuatable valves include a "first plurality of electrically actuatable valves" and "at least one other electrically actuatable valve." The first plurality of electrically actuatable valves are operable to supply compressed air to the service-brake circuits and are in an open position in a de-energized normal state. The "at least one other electrically actuatable valve" is operable to supply compressed air to the high pressure compressed air load circuit and is in a closed position in a de-energized normal state.

In support of the rejection of independent claim 1, the Examiner relies upon Beck as allegedly showing all features of claim 1 apart from the feature of "said first plurality of electrically actuatable valves [operable to supply compressed air to said plurality of service-brake circuits] are in an open position in a de-energized normal state" (*see, e.g.*, the final Office Action, page 3). That is, the Examiner acknowledges that Beck fails to show or suggest this feature of claim 1 (*see, e.g.*, *id.* at lines 20-22).

In an attempt to make up for this severe deficiency of Beck, the Examiner then cites Crouch (*see, e.g.*, the final Office Action, page 4). Crouch is directed to a braking system for trains. Among other things, Crouch's system can include valves 66 and 72 which are normally closed in their de-energized states (*see, e.g.*, Crouch, column 5, lines 54-56). Valve 72 is a vent valve whereas valve 66 can supply air from main reservoir 28 into brake pipe 1 (*see, e.g.*, *id.* at lines 53-54; column 7, lines 31-35). Crouch then teaches a modified system where valves 66 and 72 are replaced with valves that are normally open in their de-energized states (*see, e.g.*, *id.* At column 9, lines 55-69). The Examiner contends that this citation of Crouch teaches that a valve in a normally closed state can be replaced with a valve in a normally open

state, and thus it would be obvious to one skilled in the art to modify Beck in this manner (*see, e.g.,* the final Office Action, page 4, lines 4-7 and page 9, lines 6-11).

However, applicants respectfully submit that Beck cannot be combined with Crouch in this manner for at least the reason that doing so would render the Beck system inoperable for its intended purpose. And, "if a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification" (MPEP 214.01.V, citing *In re Gordon*, 733 F.2d 900). The intended purpose of Beck is to protect the vehicle (i.e., and the driver) in the event of an electrical system failure (*see, e.g.,* Beck, abstract, lines 5-7, column 2, lines 21-28, column 3, lines 35-42, and column 6, lines 5-28). During an electrical system failure, all circuits will revert to their normal, de-energized state. This means that in the Beck system, all solenoid valves will be closed in the event of an electrical system failure (*see, e.g.,* Beck, column 6, lines 5-7). These closed valves, in turn, prevent the consumer circuits from losing air pressure. During an electrical system failure, air pressure is also allowed to be supplied from relief valve 32 and through non-return valves 31 to the brake circuits (*see, e.g.,* Beck, column 6, lines 6-10). In this manner, as a result of the closed valves, "air under pressure continues to be available to any or all of the consumer circuits, and braking of the vehicle is assured...this ensures the vehicle is able to reach its destination, or a suitable repair facility" (*see, e.g.,* Beck, column 6, lines 11-13 and 27-28).

Accordingly, it is submitted that one skilled in the art would have no motivation whatsoever to combine Beck with Crouch (or for that matter to generally combine Beck with the knowledge of normally-open valves), since doing so would result in Beck having valves that are open in a de-energized state. Should the electrical system of Beck then fail, due to these open valves the consumer circuits would not have air pressure and the braking systems would not function. Thus, the combination of Beck with Crouch would effectively destroy the Beck system, since the intended purpose of Beck is to ensure air pressure is provided to consumer circuits during an electrical system failure, such that "braking of the vehicle is assured" (*see, e.g.,* Beck, column 6, lines 11-14). Accordingly, as taught by the MPEP and case law, there is no motivation to combine Beck with Crouch and these references thus fail to show or suggest all

features of applicants' claimed invention, as defined by independent claim 1 (*see, e.g.*, MPEP 214.01.V, citing *In re Gordon*, 733 F.2d 900).

For at least the above reasons, applicants respectfully submit that independent claim 1, and the claims depending therefrom, including claims 2-13, are allowable over Beck and Crouch, whether taken alone or in combination. Applicants therefore respectfully request that the 35 U.S.C. § 103(a) rejection of claims 1, 3, 4, 11, and 13 be withdrawn.

VI. Applicants' Reply to the 35 U.S.C. § 103(a) Rejections
With Respect to Beck, Crouch, Buma I, Buma II, Müller, and/or Terborn

The Examiner rejected claims 2 and 12 under 35 U.S.C. § 103(a) as being unpatentable over Beck in view of Crouch and further in view of Buma I. The Examiner also rejected claims 5 and 6 under 35 U.S.C. § 103(a) as being unpatentable over Beck in view of Crouch and further in view of Buma II. The Examiner further rejected claim 7 under 35 U.S.C. § 103(a) as being unpatentable over Beck in view of Crouch and further in view of Müller. Lastly, the Examiner rejected claims 8-10 under 35 U.S.C. § 103(a) as being unpatentable over Beck in view of Crouch and Müller and further in view of Terborn.

Claims 2, 5-10, and 12 each depend from independent claim 1. As explained above, independent claim 1 is patentable. Accordingly, applicants respectfully submit that dependent claims 2, 5-10, and 12 are patentable at least by reason of their dependency from a patentable base claim. Applicants therefore respectfully request that the 35 U.S.C. § 103(a) rejections of these claims be withdrawn.

VII. Conclusion

In view of the foregoing amendments and remarks and the telephone interview with the Examiner, applicants respectfully submit that this application is in condition for immediate allowance. Notice to this effect is respectfully requested.

No fee is believed due with this Reply other than the \$810 fee for the accompanying RCE. Please charge this fee and any fee deficiencies to Deposit Account No. 50-0540.

Respectfully submitted,

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